

Candidate Information Bulletin



Commonwealth of Massachusetts Plumbing and Gas Fitting Examinations

→ IT IS YOUR RESPONSIBILITY TO UNDERSTAND THE CONTENTS OF THIS BULLETIN ←

Eligibility and Examination Registration

Eligibility to take a license qualification examination is determined by the Commonwealth of Massachusetts, Division of Professional Licensure, Board of State Examiners of Plumbers and Gas Fitters. For applications and detailed information about eligibility requirements write or phone:

**Commonwealth of Massachusetts
Division of Professional Licensure**
Board of Plumbers and Gas Fitters
239 Causeway Street
Boston, MA 02114
Phone: 617.727.9952

Application

Your application for any of the following licenses must be submitted to the Division of Professional Licensure:

Master Plumber
Journeyman Plumber
Master Gas Fitter
Journeyman Gas Fitter
LP Gas Installer

Exam Dates

Deadline for Fee, Application and Registration Form	Examination Date
January 9, 2004	March 6, 2004
April 2, 2004	June 5, 2004
July 9, 2004	September 11, 2004
October 1, 2004	December 4, 2004

Locations

Boston (Greater Boston Area)
New Bedford
Springfield
Worcester

Fees

You must submit to the Commonwealth of Massachusetts one money order (ONLY) made payable to Exterior in the amount of \$117.00. This covers the application fee and the examination fee.

Examination fees are nonrefundable.

Admission to the Examination

If your application is approved, the Examination Registration Form and the examination fee will be sent by the Board to Exterior. Your name will be placed on the roster for the next administration of the examination.

Approximately 10 days before the examination, Exterior will send you an Admission Letter that will show the specific date, time and location of the examination.

Only pre-registered candidates will be admitted to the examination. No walk-in applicants will be admitted.

Those candidates not appearing for their scheduled examination will forfeit the examination fee.

If you lose your Admission Letter, or have not received an Admission Letter two days before the test date, **contact Exterior immediately at 508.624.0826. It is your responsibility to contact Exterior before the examination date.** Please notify Exterior and the Division of any change of address. Send notification of change of address to:

Exterior
2 Mount Royal Avenue, Suite 250
Marlborough, MA 01752

Candidates with Special Needs

If a physical handicap prevents you from taking the examination under normal conditions, you may request special arrangements. Submit documentation of your handicap to the Board with your application to help determine what special arrangements are necessary.

Copyrighted Exam Questions

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What to Bring to the Examination

Bring your Admission Letter and one of the following forms of official photo identification: a state-issued driver's license or a current government-issued passport. If you do not have one of these forms of identification, contact Exporior.

Bring two No. 2 pencils to mark your answer sheet.

You are NOT allowed to use a calculator of any kind, nor any Code or reference books during the examination. All examinations are closed book.

Score Information

The results of the examination will be mailed to the Board of State Examiners of Plumbers and Gas Fitters and to you, the candidate, approximately five weeks after the examination date. A minimum score of 70 percent of the questions answered correctly is required to pass the examination. All Score Reports are mailed simultaneously. Score Reports will provide you with information regarding the next step in the licensure process. To ensure confidentiality of your examination score, **scores will NOT be given over the telephone.**

Review of the Examinations

The review is a study session conducted similar to an examination and its purpose is to allow you to review questions you failed on the last examination. The review is not for the purpose of teaching the examination subject material. You are not allowed to take an advisor or anyone with you to the review.

If you are unsuccessful in passing the examination, you will receive a review Registration Form with your Score Report. If you want to register for the review you must return this form to Exporior with the \$80.00 review fee made payable to Exporior by the deadline shown on the review form.

Description of the Examinations

The general content of the written examinations is based on basic knowledge of the *Massachusetts Plumbing and Gas Fitting Codes* and the plumbing trade. The

examinations are written to sample a wide area of skills and knowledge necessary for competency as a plumber.

All examinations are **closed book**, multiple-choice format. For ALL questions on the examination you will be required to mark your answers on a separate answer sheet. Some questions may require arithmetic. Some questions may refer to a figure drawing, table or chart located in the test booklet.

Plumbing Examinations

The plumbing examinations consist of two parts. Each part will be scored separately. If you only pass one part, you will only need to retake the part you did not pass.

You will have four hours to complete both parts of the examination. However, if you are taking only one of the parts, the time limit is two hours.

Part I - Written

The Journeyman Part I will have 60 questions. The Master Part I will have 70 questions.

Part I will contain questions from five general areas listed below.

1. Installation Practices (approximately 15%)

Candidates will be required to show knowledge of proper installation practices and applications. This includes knowledge of basic to complex piping configurations, installation of fixtures and trims, rough-in of piping and gas systems, backflow prevention, OSHA and environmental requirements (such as trench work and use of safety devices), description of plumbing and gas materials used in residential, commercial, industrial and medical installations.

2. Science and Theory (approximately 5%)

Candidates will be required to show theoretical knowledge attained through study and practice covering general truths and operation of general laws. This includes knowledge of water and its' properties, air and its' properties, pressures, vacuum, weights, sanitary health hazards, environmental hazards, sewage and waste disposal, types and properties of gas, traps, seals, vents, structures of matter, solutions and suspensions of liquids, ferrous and non-ferrous metals and corrosion of materials.

3. Math (approximately 20%)

Candidates will be required to show basic knowledge of arithmetic and geometry and ability to solve basic to complex plumbing and gas fitting problems. Questions may include the use of fractions, decimals, square roots, pipe equations, pressures, friction, capacities, areas, volumes, rules relevant to circles, temperature conversions, thermal expansion, BTU

calculations, weight, loads, distances, percentages, grades, sizing of DWV systems, leaders, water supply systems, and use of tables, calculation of direct and indirect costs, man-hour costs and general math involved in business accounting.

4. Blueprint Reading and Design (approximately 5%)

Candidates must show skills in reading and interpreting blueprints. This may include working sketches, manufacturers' drawings and specifications, take-offs, estimating, system design, grades, use of instruments and identification and interfacing of code standards with drawings.

5. Code (approximately 55%)

Candidates must have the ability to comprehend and apply the *Massachusetts Plumbing and Gas Fitting Codes* in performance of plumbing and gas fitting jobs. This area may include Rules and Regulations.

Part II – Practical

Both Journeyman and Master Plumber Part II will have 30 questions.

Part II of the plumbing examinations consist of multiple-choice questions referenced to plumbing such as sizes, dimensions, clearances, capacities, etc. as they apply to the drawings presented in the examination. Some questions may ask you to recognize compliance with, or a violation of, the code as shown in the drawing and as they relate to fittings and appurtenances. You will read the question, analyze the drawing and then mark your choice for an answer on the separate answer sheet.

Gas Fitting Examinations

The gas fitter examinations consist of one part. All gas fitter examinations are closed book, multiple-choice format. The time limit for these examinations is two hours. The content areas are described below.

1. Combustion Air and Venting (approximately 20%)

Code rules for supplying adequate combustion air and providing proper ventilation for fuel gas burning appliances.

2. Piping Installation Practices (approximately 20%)

Piping installation practices in general as well as the *Code* restriction dealing with the installation of fuel gas piping. It covers a knowledge of piping joints, piping system lay-out, supports and the requirements for the installation of buried and embedded fuel gas piping.

3. Materials (approximately 15%)

Code restrictions covering the use of the various pipe and pipe fitting materials available for fuel gas piping. It covers basic questions on where and with which fuel gases certain materials may be used.

4. Sizing and Estimating (approximately 10%)

Estimates of fuel gas requirements and size the various components of the fuel gas piping system to provide adequate fuel supply to each appliance.

5. Equipment Locations (approximately 10%)

Code rules on the location of gas meters, control valves, pressure regulators, and other fuel gas distribution equipment. The emphasis of these *Code* restrictions is on safety and accessibility.

6. Code Definitions (approximately 10%)

General knowledge of fuel gas piping materials and components as defined by *Code*.

7. Testing (approximately 5%)

Testing requirements established by *Code* for the components of fuel gas piping systems.

8. Trouble Shooting and Adjustment (approximately 5%)

Ability to recognize improper operation and make minor adjustments necessary to assure safe operation of fuel gas burning appliances.

9. Pressure Limitations (approximately 5%)

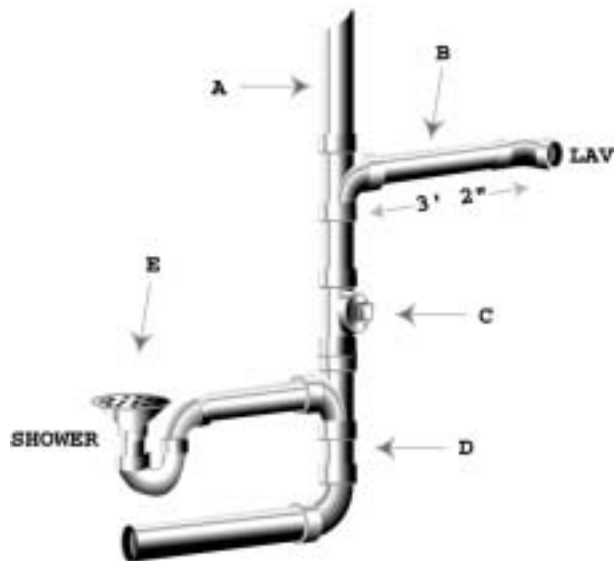
Code restrictions on the interval pressures permitted in various fuel gas piping components.

Sample Questions

The following sample questions illustrate the types of multiple-choice questions in the test in several of the general content areas. An answer key is provided at the end of the sample questions.

1. According to *Code*, when is more than one building allowed to be connected through a single sewer tap?
 - (A) Never, it is prohibited
 - (B) A separate sewer tap is not feasible
 - (C) Both buildings have the same owner
 - (D) The sewers first converge in a cleanout manhole

2. Refer to the figure below.



What **MINIMUM** size pipe is required at "D"?

- (A) 1-1/2"
 - (B) 2"
 - (C) 2-1/2"
 - (D) 3"
3. Given: Fittings are to be inserted in a gas line that was installed in a concealed location.

The pipe may **NOT** be reconnected by

- (A) welding.
- (B) center punched union.
- (C) flanges.
- (D) a running thread.

Answers to Sample Questions

1-B; 2-B; 3-D

Questions and Answers

QUESTION: How do I apply to take the examination?

ANSWER: You must request an application from the Board. The Board will either approve your application or reject it informing you of the deficiency and returning your application. If you are approved, the Board will forward your Registration Form to Exporior. You will be mailed an Admission Letter approximately 10 days before the examination listing the site, time and what to bring to the examination.

QUESTION: What happens if I don't receive an Admission Letter?

ANSWER: If you do not receive an Admission Letter two days before the examination you must contact Exporior. **This is your responsibility.**

QUESTION: When do I get my score?

ANSWER: Your score will be mailed approximately five weeks after the examination.

QUESTION: What happens after I get my score letter?

ANSWER: Candidates who pass the examination will receive licensing information enclosed with their Score Report. Failing candidates must complete the retake form enclosed with their Score Report and return it to the Commonwealth of Massachusetts with the appropriate fees.